

**REMARKS**

***Status of Application***

Claims 1-3, 5, 7, and 9-23 are all the claims pending in the Application.

***Amendments to the Claims***

Applicant has amended claim 1 to incorporate the features of previously pending claim 4, claim 7 to incorporate the features of previously pending claim 24, and claim 9 to incorporate the features of previously pending claim 25. Applicant has cancelled claims 4, 6, 24, and 25. Applicant respectfully submits that the amendments should be entered as a matter of course since they cancel rejected subject matter and merely write prior pending subject matter into base claims. Applicant submits that the amended claims do not raise new issues in need of further search or consideration. Applicant has additionally amended claim 21 to correct a minor clerical error. Applicant respectfully requests that the Amendment be entered as a matter of course. Absent such entry, the Examiner is obligated to rebut any arguments set forth herein since none of the arguments are based on newly added material, and all subject matter was previously before the Examiner.

***Claim Rejections Under 35 U.S.C. § 112***

The Examiner has rejected claim 21 under 35 U.S.C. § 112, second paragraph, as allegedly indefinite. Applicant has amended the claim and respectfully asks that the rejection be withdrawn.

***Claim Rejections Under 35 U.S.C. § 102***

The Examiner has rejected claims 1-3, 5, 7 and 9-23 under 35 U.S.C. § 102(b) as allegedly being anticipated by Doi et al. (US 2002/0172403). Applicant notes that claims 21-23

are not listed as rejected on page 5 but are addressed as rejected on pages 10 and 11 of the Office Action.

Applicant traverses, as the reference does not disclose or teach all the features of the claims. For example, amended claim 1 features judging the type of pattern by calculating the presence frequency of density patterns within small regions (unit pixel groups) that constitute the inner/outer outline images.

The Examiner asserts that paragraph 64, lines 10-12, of Doi discloses this feature (page 10). Paragraph 64 of Doi is:

Once the nodule outline is determined in step S50 of FIG. 10, the next step S60 to be performed is feature extraction. In an effort to evaluate prospective features to be extracted, a study was performed in which eighty-one features were examined. In addition to two clinical parameters (age and sex), seventy-nine image features were determined from the outline or texture analysis for inside and outside regions of the segmented nodule. Feature values based on texture analysis were determined by use of four different kinds of images, i.e., the original image, the background trend and the density-corrected image (see Reference 7), and their corresponding edge gradient images, which were obtained by use of a Sobel filter. The mask size of the Sobel filter was 21x21 pixels, which appeared to provide nodule edges conspicuously in the edge-gradient images. The seventy-nine image features included seven features based on the outline, and two features based on texture analysis of the original image and the corrected image ( $2 \times 2 = 4$ ), six features based on texture analysis of two edge-gradient images ( $6 \times 2 = 12$ ), four features based on texture analysis of four different kinds of images ( $4 \times 4 = 16$ ), and ten features based on the relationship between the two histograms in the inside and outside regions of the segmented nodule for four different kinds of images ( $10 \times 4 = 40$ ).

Rather than describing calculating the presence frequency of density patterns within small regions (unit pixel groups) that constitute inner/outer outline images, the provided portion of Doi merely describes, *at best*, a study of “ten features based on the relationship between the two histograms in the inside and outside regions of the segmented nodule for” a density corrected image. Examples of such histograms, the comparison of individual gray-level pixel values of an inside and an outside region of a single nodule, are shown in Figs. 6a and 6b and

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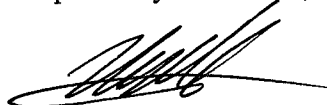
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AMENDMENT UNDER 37 C.F.R. § 1.116  
Application No.: 10/803,895

Attorney Docket No.: Q80309

Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said  
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**23373**

CUSTOMER NUMBER

Date: April 23, 2009